

A NEW SPECIES OF THE GENUS EUPHITREA BALY FROM CHINA AND DESCRIPTION OF MALE OF *E. RUFOMARGINATA* WANG (COLEOPTERA, CHRYSOMELIDAE, ALTICINAE)

WANG Shu-Yong¹, GE De-Yan^{1,2}, LI Wei-Zhu¹, YANG Xing-Ke^{1*}

1. Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

2. Graduate School of Chinese Academy of Sciences, Beijing 100049, China

Abstract In the present paper a new species, *Euphitrea excavata* Wang et Yang, sp. nov. is described and illustrated based on a male specimen collected from Xizang, China, which was found out under rock from high altitude. The description of the male of *E. rufomarginata* is given from specimens collected from Pianma County, Yunnan Province. All specimens studied during this research are preserved in the Institute of Zoology, Chinese Academy of Sciences Beijing, China.

Key words Chrysomelidae, Alticinae, *Euphitrea* Baly, new species, *Euphitrea rufomarginata*, China.

Euphitrea Baly was established in 1875 based upon type species *E. wallacei* Baly collected from Sumatra (Baly, 1875). To date, about 43 known species of this genus were reported from the Oriental Region, of which 28 species occur in China, including a new species of present paper (Jacoby, 1889, 1894; Weise, 1922; Maulik, 1926; Chen 1933, 1934; Chûjô, 1935; Gressitt & Kimoto, 1963; Kimoto, 1965; Sherer, 1969; Wang, 1992, 1996; Medvedev, 1998; Zhang & Yang, 2006).

Species of this genus differs from species in other genera by: body rounded and strongly convex from dorsal view; vertex strongly and longitudinally raised medially and excavated on each side above eye by a deep furrow; antennae filiform and extending beyond the scapular of elytra; anterior coxal cavities closed behind.

During field study in the summer of 2006, a male specimen belonging to *Euphitrea* was collected by Dr. LIANG Hong-Bin from Nyingchi County, Xizang, China. After comparing it with specimens of our collections and literatures of known species, this specimen differs from them greatly and we describe it as a new species. In 1992, the first author of the present paper briefly described *E. rufomarginata* (Wang, 1992) based on a single female specimen collected from Pianma of Yunnan Province. On 16 May 2005, more specimens of this species were collected by Dr. LIANG Hong-Bin and Dr. SAN Y. H. from the type locality. Detailed description of male and illustrations of aedeagus is given here.

Euphitrea excavata Wang et Yang, sp. nov. (Figs. 1-3)

Male. Body nearly rounded, short and broad, distinctly convex from dorsal view. Head, scutellum, abdomen and legs yellow brown, postal vertex area

somewhat black; three basal segments of antennae brownish yellow, following segments gradually change into black; pronotum bears a black patch medially; elytra cupreous green with metallic luster.

Head with vertex convex, surface finely punctate; postocular depression deep and broad, frontal tubercle triangular and small, separated from each other by frontal area, frontal area broad, somewhat transverse hexagon shaped, convex and smooth; labrum with a row of thick punctures, each puncture with a setae (Fig. 1); mandible strong with distinct horned expansion on each side, which forms a somewhat wide and flat upside surface and a distinct introrse excavation of each exterior surface, the introrse excavation wide sulciformed (Fig. 2). Antennae extend backward beyond scapular of elytra, third segment somewhat longer than second segment, followings as long as second segment and gradually thickened. Pronotum transverse, 2.5 times as broad as long medially, disc area evenly convex with finely punctures. Scutellum triangular, smooth and impunctate. Elytra punctures deeper and coarser than those of pronotum, basal area of lateral margin impunctate, longitudinal carina narrow and short, about 1/3 length of basal area. Each tarsus with first segment distinctly dilated in male, last segment of abdomen bears apical margin flat. Aedeagus wide and rounded from ventral view (Fig. 3). Body length 5.0 mm, width 3.5 mm.

Female. Unknow.

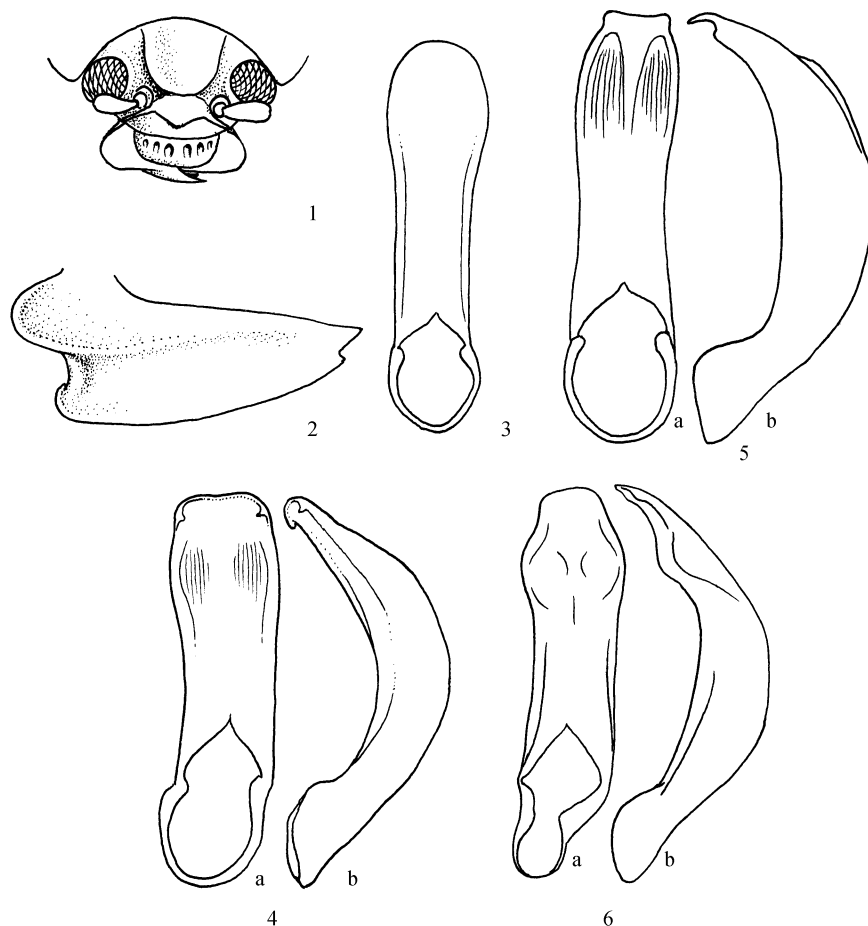
Holotype male; China, Xizang, Nyingchi, Segyla Mountain (29.6°N, 94.6°E), 4565 m, 31 Aug. 2006, collected by LIANG Hong-Bin, under the rock.

This species is similar to *E. oribipennis* Chen et Wang morphologically, but differs from the latter in the shape of mandible, aedeagus, and the color of

This work was supported by CAS Innovation Project (KSCX2-YW-Z015).

* Corresponding author, E-mail: yangxk@ioz.ac.cn

Received 15 June 2007, accepted 6 Dec. 2007.



Figs 1-3. *E. excavata* Wang et Yang, sp. nov., male. 1. Head, dorsal view, showing the mandible. 2. Mandible, lateral view, showing the lateral excavation. 3. Aedeagus, ventral view. Figs. 4-6. Aedeagus, a ventral view, b. lateral view. 4. *E. rufomarginata* Wang. 5. *E. mians* Baly. 6. *E. cribripennis* Chen et Wang.

antennae; the latter without distinct introrse excavation on exterior surface of mandible, apical of aedeagus somewhat contracted with evident convex from ventral view (Fig. 6), and antennae reddish brown.

Etymology. “*excavata*” means concave in Latin, which refers to the introrse excavation in lateral margin of mandible.

Distribution. China (Tibet).

E. rufomarginata Wang, 1992 (Fig. 4)

Euphitrea rufomarginata Wang, 1992, 1: 685; Zhang & Yang, 2006, 108 (4): 842-859.

Male. Body rounded, convex. Head, pronotum, antennae and legs dark reddish brown; disc area of elytra cupreous green with metallic luster; margin of elytra (from basal scapular to elytra apex) bear deep red strips, which convex in 1/3 parts of the base area and impunctate.

Head convex with finely punctures, vertex strongly and longitudinally raised in middle and excavated on each side above eye by a deep furrow, furrows wide and opened behind; intra-antennae space flat and lowed, mandible normal without distinct convex or carina. Antennae longer than female, which extending beyond

scapular of elytra, second segment oblong and short; third and fourth segments long and thin with brightness and generally without hairs; 5 to 10 segments thickened with densely hairs and length of each segment 1.5 times of its width. Pronotum transverse, lateral margins are shaped and distinctly short, constricted anteriorly and posteriorly; basal margin distinct extended backward medianly; disc area convex equally and lateral margins clearly visible from dorsal view, disc surface punctures finely and evenly distributed, with wrinkle between punctures, and thicker than those of vertex. Scutellum triangular, smooth and impunctate. Elytra with scapular convex, bright and impunctate, punctures of disc area coarser and deeper than those of pronotum, and with small punctures dispersed among big punctures; lateral margins in basal 1/2 parts distinctly raised with brightness and impunctate. Protarsi and mesotarsi with first segment strongly pyriform amplified, but metatarsi bear slight ampliation. Abdomen with last segment somewhat trilobe shaped, middle lobes extended backward without distinct depression. Aedeagus apex broad and truncate with one spine-shaped projection on both sides apically from ventral view (Fig. 4) and are shaped from lateral

view.

Material examined. Holotype of *E. rufomarginata* Wang, ♀, Yunnan, Pianma (26.1°N, 98.6°E, 1 787 m), 27 May 1981, collected by Pro. ZHAO Jiann-Ming; 21 ♂♂, 23 ♀♀, same data as holotype, 16 May 2005, collected by Dr. LIANG Hong-Bin and Dr. SAN Y. H.

This species is similar to *E. cribripennis* Chen et Wang, 1980 and *E. mians* Baly, 1875. It can be distinguished from the former by following characteristics: firstly, pronotum of *E. rufomarginata* evenly convex, lateral margin visible from dorsal view, while pronotum of *E. cribripennis* strongly convex, lateral margin invisible from dorsal view; secondly, elytra of *E. rufomarginata* bear deep red margin and finely punctate in disc area, while elytra of *E. cribripennis* totally cupreous green without deep red margin; thirdly, the aedeagus apex of *E. rufomarginata* truncate with thorn shape convex on both lateral side apically from ventral view, while *E. cribripennis* bear tubercal convex in front of apex (Fig. 6). It also can be distinguished from *E. mians* by following characteristics: firstly, their disc area of elytra different colored, *E. mians* totally brown, while *E. rufomarginata* cupreous green with metallic luster; secondly, from ventral view, aedeagus of *E. mians* distinct constricted before apex and bear 2 oblong ovate depression, which contain some longitudinal ridges (Fig. 5).

Distribution. China (Yunnan).

Acknowledgement We appreciate Dr. LIANG Hong-Bin and Dr. SAN Y. H. for their help in collecting specimens. We acknowledge anonymous reviewers for providing helpful comments on the manuscript.

REFERENCES

Baly, J. S. 1875. Description of new genera and species of Phytophaga.

Transactions of the Entomological Society of London, 1875: 23-31.

- Chen, S. H. 1933. Tableau synoptique des espèces du genre *Neorthaea* Maulik appartenant à la famille des Chrysomelidae, avec descriptions d'espèces nouvelles. *Bulletin de la Société Entomologique de France*, 38: 88-96.
- Chen, S. H. 1934. Revision of the Halticinae of Yunnan and Tonkin. *Sinensia*, 5 (3-4): 225-416.
- Chûjô, M. 1935. Studies on the Chrysomelidae in the Japanese Empire 8. Subfamily Halticinae (3). *Transactions of the Natural history of Formosa*, 25: 459-476.
- Gressitt, J. L. and Kimoto, S. 1963. The Chrysomelidae (Coleoptera) of China and Korea. Part 2. *Pacific Insects Monograph*, 1B: 300-1026.
- Jacoby, M. 1889. List of the Phytophagous Coleoptera obtained by Signor L. Fea at Burma and Tenasserim, with descriptions of the new species. *Annali Museo Civico Genova*, ser. 2, 7 (27): 147-237.
- Jacoby, M. 1894. Description of new species and species of Phytophagous Coleoptera obtained by W. Doherty in the Malayan Archipelago. *Novitates Zoologicae*, 1: 267-330.
- Kimoto, S. 1965. The Chrysomelidae of Japan and the Ryukyu Islands. VIII. Subfamily Alticinae. III. *Journal of the Faculty of Agriculture, Kyushu University*, 13 (3): 401-429.
- Maulik, S. 1926. The Fauna of British India, including Ceylon and Burma. (Coleoptera, Chrysomelidae, Halticinae). Taylor and Francis, London. 1-412.
- Medvedev, L. N. 1998. To the knowledge of Oriental Alticinae (Coleoptera: Chrysomelidae). *Russian Entomological Journal*, 7 (3-4): 147-156.
- Sherer, G. 1969. Die Alticinae des Indischen Subcontinents (Coleoptera: Chrysomelidae). *Pacific Insects Monograph*, 22: 222-225.
- Wang, S-Y 1996. Coleoptera: Chrysomelidae: Alticinae. In: Yu, P-Y et al. (ed.), *Economic Insect Fauna of China*. Science Press, Beijing, pp. 248-253.
- Wang, S-Y 1992. Coleoptera, Alticinae. In: Chen, (ed.), *Insects of the Hengduan Mountains Region*. Science Press, Beijing. 675-753.
- Weise, J. 1922. Chrysomelidae der Indo-Malayischen Region. *Tijdschrift voor Entomologie*, 65: 39-130.
- Zhang, Y and Yang, X-K 2006. A study on the flea beetle genus *Euphitrea* Baly from China, with description of five new species (Coleoptera: Chrysomelidae: Alticinae). *Proceedings of the Entomology Society of Washington*, 108 (4): 842-859.

中国凸顶跳甲属一新种记述及一雄虫的首次描记 (鞘翅目, 叶甲科, 跳甲亚科)

王书永¹ 葛德燕^{1,2} 李文柱¹ 杨星科^{1*}

1. 中国科学院动物研究所 北京 100101 中国

2. 中国科学院研究生院 北京 100049 中国

摘要 对采自西藏林芝的 1 新种 *Euphitrea excavata* Wang et Yang, sp. nov. 进行了描述, 并对采自云南泸水片马红缘凸顶跳甲 *Euphitrea rufomarginata* Wang 的雄虫进行了首次描记, 新

种模式标本和重新描述的标本均保存于中国科学院动物研究所昆虫标本馆。

关键词 叶甲科, 跳甲亚科, 凸顶跳甲属, 新种, *Euphitrea rufomarginata* Wang, 中国.

中图分类号 Q969.48

* 通讯作者.